30. For use in a riser line extending from the sea floor to the sea surface, a variable buoyancy buoy comprising:

a frame having first and second ends;

a first buoyancy member mounted on the frame;

a second buoyancy member selectively mountable on the frame to change the buoyancy of the buoy;

means for securing the second buoyancy member on the frame; and

means located at the first and second ends of the frame for securing the buoy in the riser line.

31. The variable buoyancy buoy according to Claim 30 further characterized by a plurality of second buoyancy members each selectively mountable on the frame to change the buoyancy of the buoy, and means for securing the second buoyancy members in engagement with the frame.

32. The variable buoyancy buoy according to Claim 31 wherein the first buoyancy member and the second buoyancy members are formed from syntactic foam.

33. The variable buoyancy buoy according to Claim 32 wherein the frame includes a shaft extending through the first buoyancy member, a fixed plate comprising one end of the frame and secured

to the shaft in engagement with the first buoyancy member, and a second plate comprising the opposite end of the frame and selectively engageable with the shaft for securing the variable buoyancy members in engagement therewith.

34. The variable buoyancy buoy according to Claim 33 wherein the retaining means comprises a fastener extending through the second plate and the shaft for securing the second plate and the variable buoyancy members in engagement with the shaft.

35. A variable buoyancy buoy comprising:

a frame having first and second ends;

a first plate securably mounted to the first end of the frame;

a second plate selectively positionable along the frame between the first and second ends of the frame;

a first buoyancy member mounted on the frame adjacent to the first plate; and

a second buoyancy member selectively mountable on the frame between the first buoyancy member and the second plate, whereby the second plate is positioned along the frame proximate the second buoyancy member.

36. The variable buoyancy buoy according to Claim 35 further comprises a third buoyancy member selectively mountable on the

frame between the second buoyancy member and the first buoyancy member.

37. The variable buoyancy buoy according to Claim 36 further comprises a fourth buoyancy member selectively mountable on the frame between the second buoyancy member and the first buoyancy member.

38. The variable buoyancy buoy according to Claim 37 further comprises a fifth buoyancy member selectively mountable on the frame between the second buoyancy member and the first buoyancy member.

39. The variable buoyancy buoy according to Claim 35 wherein the first buoyancy member and the second buoyancy member are formed from syntactic foam.

40. The variable buoyancy buoy according to Claim 35 wherein the shaft includes a plurality of spaced apart holes along at least a portion of the length of the shaft that receive a fastener extending through the second plate such that the second plate may be positioned in a plurality of locations along the shaft.

A2 Cont. B2

41. The variable buoyancy buoy according to ~~Claim 35~~ further comprises first and second ~~pad eyes~~ respectively positioned on the ~~first~~ and second ends of the shaft.

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